October 12, 2001

Mr. C. Lance Terry
Senior Vice President
& Principal Nuclear Officer
TXU Electric
Attn: Regulatory Affairs Department
P. O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: INCREASE IN ALLOWABLE THERMAL POWER TO 3458 MWT AND DELETION OF TEXAS MUNICIPAL POWER AGENCY FROM THE OPERATING LICENSES (TAC NOS. MB1625 AND MB1626)

Dear Mr. Terry:

The Commission has issued the enclosed Amendment No. 89 to Facility Operating License (FOL) No. NPF-87 and Amendment No. 89 to FOL No. NPF-89 for CPSES, Units 1 and 2, respectively. The amendments consist of changes to FOL Nos. NPF-87 and NPF-89 and the Technical Specifications in response to your application dated April 5, 2001, as supplemented by letters dated June 28, August 2, and September 10, 2001.

The amendments increase the maximum, licensed, thermal power of CPSES, Units 1 and 2, to 3458 MWt, which represents an increase of approximately 1.4 percent of the currently licensed thermal power for CPSES, Unit 1, and an increase of approximately 0.4 percent for CPSES, Unit 2. In addition, the amendments remove Texas Municipal Power Agency (TMPA) from both Unit 1 and Unit 2 licenses since transfer of partial ownership from TMPA to TXU Electric was completed.

A copy of our related Safety Evaluation, and Notice of Issuance, for publication in the *Federal Register,* are also enclosed.

Sincerely,

/RA/

David H. Jaffe, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosures:
1. Amendment No. 89 to NPF-87
2. Amendment No. 89 to NPF-89
3. Safety Evaluation
4. Notice of Issuance

cc w/encls: See next page

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The amendments increase the maximum, licensed, thermal power of CPSES, Units 1 and 2, to 3458 MWt, which represents an increase of approximately 1.4 percent of the currently licensed thermal power for CPSES, Unit 1, and an increase of approximately 0.4 percent for CPSES, Unit 2. In addition, the amendments remove Texas Municipal Power Agency (TMPA) from both Unit 1 and Unit 2 licenses since transfer of partial ownership from TMPA to TXU Electric was completed.

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DISTRIBUTION: See attached page

Distribution for Letter Dated: October 12, 2001.

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: INCREASE IN ALLOWABLE THERMAL POWER TO 3458 MWT AND DELETION OF TEXAS MUNICIPAL POWER AGENCY FROM THE OPERATING LICENSES (TAC NOS. MB1625 AND MB1626)

Dated: October 12, 2001

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**With changes
*With comments

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OFFICE	PDIV-1/PM	PDIV-1/LA	TECH ED	OGC	PDIV-1/SC
NAME	DJaffe	DJohnson*	PKleene	AFernandez	RGramm
DATE	09/13/01	09/12/01	10/09/01	10/03/01	10/05/01

OFFICE	PDIV	EEIB-A	EEIB-B	EMEB	EMCB	SPSB
NAME	RGramm for SRichards	HGarg	CHolden	KManoly	ESullivan	FReinhart
DATE	10/05/01	09/14/01	09/13/01	09/19/01	09/2/01	09/02/01

OFFICE	SRXB	SPLB	IOHS*	D:DLPM	ADT
NAME	JWerrmiel	RLobel for GHubbard	DTrimble	TMarsh for JZwolinski**	BSheron
DATE	09/20/01	09/20/01	09/17/01	10/11/01	10/11/01

OFFICE	D:NRR
NAME	JJohnson for SCollins
DATE	10/12/01

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TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 1

DOCKET NO. 50-445

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 89
License No. NPF-87

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by TXU Electric dated April 5, 2001, as supplemented by letters dated June 28, August 2, and September 10, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-87 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 89 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TXU Electric shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented no later than following the next refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by JJohnson for/

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License and Technical Specifications

Date of Issuance: October 12, 2001

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 2

DOCKET NO. 50-446

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 89
License No. NPF-89

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by TXU Electric dated April 5, 2001, as supplemented by letters dated June 28, August 2, and September 10, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-89 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 89 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TXU Electric shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by JJohnson for/

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License and Technical Specifications

Date of Issuance: October 12, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 89

TO FACILITY OPERATING LICENSE NO. NPF-87

AND AMENDMENT NO. 89

FACILITY OPERATING LICENSE NO. NPF-89

DOCKET NOS. 50-445 AND 50-446

Replace the following pages of Facility Operating License No. NPF-87 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
1	1
2	2
3	3
6	6

Replace the following pages of Facility Operating License No. NPF-89 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
1	1
2	2
3	3
5	5
6	6

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
1.1-6	1.1-6
3.3-15	3.3-15
3.3-16	3.3-16
5.0-32	5.0-32
5.0-33	5.0-33
5.0-34	5.0-34

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 89 TO

FACILITY OPERATING LICENSE NO. NPF-87

AND AMENDMENT NO. 89 TO

FACILITY OPERATING LICENSE NO. NPF-89

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-445 AND 50-446

1.0 INTRODUCTION

By application dated April 5, 2001, as supplemented by letters dated June 28, August 2, and September 10, 2001 (References 1, 2, 3, and 4, respectively), TXU Electric (TXU or the licensee) requested changes to Facility Operating License (FOL) Nos. NPF-87 and NPF-89 and the Technical Specifications (TSs) for the Comanche Peak Steam Electric Station (CPSES), Units 1 and 2, respectively. The proposed changes would increase the maximum licensed thermal power of CPSES, Units 1 and 2, to 3458 megawatts thermal (MWt), which would increase the currently licensed thermal power of CPSES, Unit 1, by approximately 1.4 percent, and would increase that of CPSES, Unit 2, by approximately 0.4 percent. In addition, the proposed amendments would remove Texas Municipal Power Agency (TMPA) from the Unit 1 and Unit 2 FOLs since transfer of partial ownership from TMPA to TXU has been completed.

2.0 BACKGROUND

In License Amendment 72 (Reference 5), the U.S. Nuclear Regulatory Commission (NRC or the Commission) staff approved a 1 percent increase in rated thermal power (RTP) for CPSES, Unit 2. The 1 percent power uprate for CPSES, Unit 2, was based upon the use of the Caldon, Inc. (Caldon) Leading Edge Flow Meter (LEFM✓) instrumentation, which provides a more accurate measurement of feedwater flow (1 percent RTP uncertainty) and hence a more accurate determination of reactor thermal power than previously assumed. The technical basis for this conclusion is discussed in detail in Caldon Engineering Topical Report ER-80P (Reference 6), which was approved by the NRC staff by letter dated March 8, 1999 (Reference 7). Reference 1 makes use of the Caldon methodology described in Reference 5 and a supplement (ER-160P, Reference 8) that was approved by the NRC staff by letter dated January 19, 2001 (Reference 9), to further reduce the power level measurement uncertainty to 0.6 percent RTP.

With regard to the proposed deletion of TMPA from the Unit 1 and Unit 2 FOLs, the transfer of partial ownership from TMPA to TXU was approved by the NRC staff by letter dated August 25, 1988 (Reference 10). By letter dated October 4, 1993 (Reference 11), the licensee informed the NRC staff that the licensee had paid its final installment to TMPA for TMPA's share of CPSES, Units 1 and 2. Since the share transfer is complete and no regulatory issues remain, removal of TMPA from the FOLs is an administrative change to the FOLs.

3.0 EVALUATION

In Reference 5, the NRC staff evaluated the effect of the proposed 1 percent RTP increase on safety-related components, systems, and structures at CPSES, Unit 2. The effect of the increase in RTP was also evaluated with regard to human factor issues such as training, instrumentation use, and procedure revisions. The NRC staff concluded that the 1 percent RTP increase was within the design margins for system temperatures, pressures, and radiation levels and that there were no significant human factor issues. The currently proposed power increase is minor in that it would result in only a 0.4 percent RTP increase for CPSES, Unit 2, and a 1.4 percent RTP increase for CPSES, Unit 1. As in Reference 5, the NRC staff again concludes that the proposed RTP increases for CPSES, Units 1 and 2, are within the design margins for system temperatures, pressures, and radiation levels and that there are no significant human factor issues. Since the NRC staff's review, as documented in Reference 5, and the review of the current application are essentially the same, the current review is only briefly described here; the revised Caldon methodology, which allows a decrease in power measurement uncertainty from 1 percent to 0.6 percent RTP, is more completely described since it has not been previously described for CPSES, Units 1 and 2.

3.1 Balance of Plant Systems

Balance of plant (BOP) systems were reviewed with regard to their interface with the nuclear steam supply system (NSSS) and operation at the increased RTP. In Reference 2, the licensee provided details regarding the need to complete certain confirmatory BOP calculations for CPSES, Unit 1, and committed to perform these calculations prior to the power increase scheduled to occur at the startup for Cycle 10 operation. This commitment, as described in Section 3.10 herein, is acceptable.

Based on the NRC staff's review and the experience gained from review of power uprate applications for similar pressurized-water reactor (PWR) plants, the NRC staff concludes that plant operation at the proposed increased RTP will have little or no impact on the operation of the BOP components (including piping and supports) and systems.

3.2 Structural and Operational Evaluation of the NSSS

The NRC staff reviewed the proposed increase in RTP as it relates to the structural and pressure boundary integrity and operation of the NSSS. The affected components in these systems were piping, in-line equipment and pipe supports, the reactor pressure vessel, core support structures, reactor vessel internals, steam generators (SGs), control rod drive mechanisms, reactor coolant pumps, and the pressurizer.

The NRC staff finds the licensee's evaluation to be bounded by the licensing code of record or by the existing design basis analyses; however, in its amendment request, the licensee

indicated that the power uprate conditions will increase the susceptibility of several additional tubes in the Unit 1 SGs to fluid elastic vibration, fatigue, and that the increased susceptibility may warrant additional preventive action. In resolving this issue, the licensee committed, in Reference 4, to take a corrective action, if necessary, consistent with its original commitment in response to Bulletin 88-02 (Reference 12). The NRC staff finds the licensee's response to this issue acceptable.

Based on NRC staff's approval, in Reference 5, of the licensee's previous amendment for Unit 2 to allow a 1 percent power uprate, the NRC staff concludes that the NSSS piping, components, and supports are acceptable for CPSES, Units 1 and 2, power uprate operations at the proposed core power level of 3458 MWt.

3.3 Containment Integrity

For the proposed power increase to 3458 MWt, the licensee evaluated the short- and long-term loss-of-coolant accident (LOCA) and steam line break mass and energy releases with respect to the proposed power uprate. For the LOCA mass and energy release calculations, a higher power level of 3564 MWt was used; therefore, these analyses remain valid. The mass and energy releases attributed to the steam line break were calculated for initial power levels of up to 3479 MWt; a spectrum of lower initial power levels was also considered. Analyses assuming lower power levels were found to be limiting for secondary-system breaks; thus, the containment analyses for secondary-system breaks remain unaffected. In all cases, the licensee determined that the mass and energy release calculations remained valid and, therefore, the containment integrity analyses were unaffected by the proposed power uprate.

Based on the NRC staff's review, operation at the proposed increase in RTP will have little or no impact on the containment integrity since the existing containment analyses remain valid.

3.4 Electrical Systems

The NRC staff has reviewed information provided by the licensee to determine the impact of the increase in RTP on the necessary electrical power systems. The areas reviewed were the station auxiliary electrical power distribution system, the emergency diesel generators, the environmental qualification for safety-related electrical equipment, the station blackout analysis, and the grid stability and reliability analysis.

The NRC staff has evaluated the effect of a power uprate on the areas noted above with regard to electrical components and concludes that the increase in RTP would have negligible impact on electrical components. This is consistent with General Design Criterion 17 and 10 CFR 50.49, and is acceptable.

3.5 Instrumentation and Controls

The proposed request to increase RTP for CPSES is based on a reduced uncertainty of core thermal power due to the installation of Caldon LEFM✓ to measure feedwater flow and temperature. The LEFM✓ system measurement uncertainty is 0.6 percent, which can support a power uprate of up to 1.4 percent of RTP. The licensee's submittals cited References 6 and 8 as a generic basis for the proposed 1.4 percent power uprate.

References 6 and 8 describe the LEFM✓ system and how to calculate thermal power uncertainties for a typical two-loop PWR or boiling-water reactor using the LEFM✓ system for feedwater flow and temperature measurements. The calculation resulted in a total thermal power uncertainty of ±0.6 percent with a 95 percent confidence limit. References 6 and 8 provide a generic basis for the proposed 1.4 percent uprate of the licensed reactor power and guidelines and equations for determining the plant-specific power calorimetric measurement uncertainties. In Reference 2, the licensee submitted a plant-specific power calorimetric measurement uncertainty calculation for CPSES, Units 1 and 2. This calculation was performed in accordance with the guidelines in Reference 6 and is based on Westinghouse Electric Corporation (Westinghouse) Topical Report WCAP-12123 (Reference 13). In this calculation, the licensee statistically combined the generic values of the LEFM✓ feedwater flow and temperature measurement uncertainties in References 6 and 8 with the plant-specific measurement uncertainties of all other instrumentation that affects the plant power measurement uncertainty. The resulting total power calorimetric measurement uncertainty for each CPSES unit was found to be 0.55 percent of the RTP. The calculated uncertainty is less than the generic value of 0.6 percent given in References 6 and 8 and, therefore, justifies the proposed 1.4 percent power uprate. The NRC staff review found that the licensee's calculation followed the guidelines in References 6 and 8 and accepted plant setpoint methodology. The calculation is, therefore, acceptable.

The safety evaluation (SE) in Reference 7 added four requirements to be addressed by a licensee citing Reference 6 for a power uprate:

1. The licensee should discuss the maintenance and calibration procedures that it will implement with the incorporation of the LEFM✓. These procedures should include processes and contingencies for inoperable LEFM✓ instrumentation and the effect on thermal power measurement and plant operation.

2. For plants that currently have LEFM✓ installed, the licensee should provide an evaluation of the operational and maintenance history of the installation and confirm that the instrumentation is representative of the LEFM✓ system and bounds the analysis and assumptions set forth in Topical Report ER-80P [Reference 6].

3. The licensee should confirm that the methodology used to calculate the uncertainty of the LEFM✓ in comparison with the current feed-water instrumentation is based on accepted plant setpoint methodology (as for the development of instrument uncertainty). If an alternative methodology is used, the application should be justified and applied to both venturi and ultrasonic flow measurement instrumentation for comparison.

4. Licensees for plant installations in which the ultrasonic meter (including the LEFM✓) was not installed with flow elements calibrated to a specific piping arrangement (flow profiles and meter factors not representative of the plant-specific installation), should provide additional justification for use. This justification should show that the meter installation either is independent of the

plant-specific piping arrangement for the stated accuracy or can be shown to be equivalent to known calibrations and the plant arrangements for the specific installation, including the propagation of flow profile effects at higher Reynolds numbers. Additionally, for previously installed calibrated elements, the licensee should confirm that the piping arrangement remains bounding for the original installation and calibration assumptions.

The licensee's submittal for the 1 percent power uprate of CPSES, Unit 2, addressed each of these additional requirements and the NRC staff found the licensee's resolutions acceptable (Reference 5). The licensee's response to these requirements was not revised in the proposed amendment and is, therefore, applicable for the proposed power uprate and is acceptable.

The licensee stated in Reference 3 that, the LEFM✓ system has internally performed continuous self-diagnostics and that the LEFM✓ system and the pressure transmitters which provide input to the LEFM✓ and their associated analog-to-digital converters are periodically calibrated per the manufacturer's recommendations. A separate procedure is periodically performed to verify the calibration of all other transmitters whose plant computer inputs are used in the plant power calorimetric measurement. The CPSES Nuclear Software Quality Assurance Program will control the LEFM✓ system software and hardware configuration, address and report deficiencies, and perform corrective actions. The program includes measures to maintain the LEFM✓ system in the validated configuration. Caldon contractually and in accordance with its Quality Assurance Plan will report any equipment or software nonconformances to the licensee. The other transmitters and associated channels that are used in the plant power calorimetric measurement are addressed by the CPSES Non-Appendix B Quality Assurance Program, which includes the requirements for design and configuration control, processing of vendor information, and a corrective action program.

The NRC staff finds that the licensee has sufficiently resolved the plant-specific concerns about maintenance and calibration of the LEFM✓ and other instrumentation affecting performance of the power calibration, about hydraulic configuration of the installed LEFM✓, about processes and contingencies for an inoperable LEFM✓, and about the methodology for calculating the LEFM✓ measurement uncertainty and the plant power calorimetric uncertainty.

The NRC staff notes that if the LEFM✓ is inoperable while the licensee is comparing the results of the calorimetric heat balance calculation to the nuclear instrumentation system and the N-16 power monitor channel output during the performance of TS Surveillance Requirement (SR) 3.3.1.2, the reactor power should be reduced to or maintained at 3411 MWt or less since the assumption of 0.6 percent uncertainty in power level measurement would no longer be valid. A power level of 3411 MWt is consistent with the non-LEFM✓ feedwater flow measurement design basis. The commitment to reduce the power level to 3411 MWt or less if the LEFM✓ is unavailable for performance of SR 3.3.1.2 is addressed in Section 3.10 herein.

Based on the review of the licensee's submittals on the LEFM✓ system and the plant power calorimetric uncertainty, the NRC staff finds that the use of the LEFM✓ system to measure feedwater flow and temperature, reduces the CPSES Units 1 and 2, thermal power measurement uncertainty to ±0.6 percent of the reactor thermal power and can support the proposed power uprate of each unit. The NRC staff also finds that the licensee adequately

addressed the four additional requirements outlined in the NRC staff SE on the LEFM✓ system topical report and the NRC staff concerns regarding all other instruments affecting plant power calorimetric measurement.

3.6 Dose Assessment

The licensee performed an assessment of the radiological dose consequences for the proposed increase in RTP. This assessment, documented in Reference 1, considered the effects of the change on post-accident equipment qualification, vital area accessibility, control room and offsite doses, and effluent releases during normal operation.

The NRC staff concludes that the licensee's analyses remain acceptable because the dose consequences of the proposed increase in RTP will remain the same as or be bounded by the current values.

3.7 Licensed Operator Performance Topics

The NRC staff reviewed the licensee's proposed increase in RTP with regard to the following human performance topics:

Topic 1 Changes in emergency and abnormal operating procedures

Topic 2 Changes to risk-important operator actions sensitive to power uprate

Topic 3 Changes to control room controls, displays, and alarms

Topic 4 Changes to the safety parameter display system

Topic 5 Changes to the operator training program and the control room simulator

The NRC staff concludes that the changes in the review topics associated with the proposed CPSES, Units 1 and 2, increase in RTP, are minor and will be satisfactorily addressed by the licensee. The NRC staff further concludes that the increase in RTP will not adversely affect simulation facility fidelity, operator performance, or operator reliability.

3.8 Safety Analyses

The licensing basis analysis for the LOCA is discussed in Chapters 4 and 15 of the CPSES Updated Final Safety Analysis Report (UFSAR), which references topical reports that describe the analysis methods and assumptions. NRC-approved methodologies are also listed in TS 5.6.5. The UFSAR cites Reference 14 and UFSAR Section 15.6, both of which state that the assumption used for reactor analysis during the large-break LOCA is 102 percent of licensed power. The licensed power in this case, is 3411MWt. The licensing basis for a small-break LOCA analysis appears in a Texas Utilities Electric topical report, which uses the analysis assumption of 102 percent of licensed power (Reference 15).

The NRC staff concludes that the results of the CPSES, Units 1 and 2, LOCA analyses meet the requirements of 10 CFR 50.46 for the increase in RTP.

With regard to non-LOCA safety analyses, many of the safety analyses for CPSES, Units 1 and 2, assumed 102 percent of licensed power. For many of these analyses, the licensee conformed to Standard Review Plan (SRP) guidance in assuming 102 percent of the licensed power level to account for power measurement error. Other safety analyses (for example, the SG tube rupture analysis) assumed an initial power level below 102 percent of the licensed power level. Although the licensee has conducted NSSS component analyses for affected primary, secondary, and BOP systems at 104.5 percent power, corresponding safety analyses were not included in the submittal. The NRC staff noted that the licensee's UFSAR evaluated SG tube rupture at 101 percent power and boron dilution at nominal power and statistically considered power measurement uncertainty in the dropped-rod-control-cluster assembly event, rather than simply adding 2 percent to the rated thermal power.

The NRC staff concludes that the licensee's safety analyses in support of CPSES, Units 1 and 2, operation at 3458 MWt are acceptable. The NRC staff concludes that the margin above rated power assumed in the LOCA analysis accounts for power measurement uncertainty. Therefore, the existing safety analyses conducted at 102 percent of rated power are acceptable at 100.6 percent of the licensed power level and do not affect associated margins of safety. The NRC staff also considered selected safety analyses that had not been conducted at 102 percent of the current rated power level. The licensee provided sufficient information to allow comparison of the results of these analyses to appropriate safety limits. The comparison gives the NRC staff confidence that sufficient safety margins for these events will be maintained at the proposed higher power level.

The NRC staff also concludes that the proposed changes to reactor protection setpoints are acceptable because the changes were made in accordance with the procedures in the Westinghouse setpoint methodology, as described in Reference 13, and because sufficient setpoint margin was maintained.

The NRC staff concludes that operation under the proposed changes will not materially change the risk of plant operation for CPSES, Units 1 and 2. Information provided by the licensee regarding the safety margin impact of the proposed change met the criteria in SRP Chapter 19 (Reference 16). Other information provided by the licensee regarding the expected effect of the proposed changes on the risk profile of the facility is consistent with previous NRC staff positions that little, if any, risk impact is associated with marginal increases in licensed power.

3.9 Changes to the FOLs and TSs

The licensee has proposed the following changes to the FOLs and TSs:

Deletion of TMPA from the FOLs: As noted previously, TMPA was a part owner of CPSES. The sale of TMPA's share in CPSES has been approved by the NRC and the conditions of the sale have been fulfilled. The licensee has proposed the deletion of the reference to TMPA in the FOLs and has also proposed editorial changes to implement the deletion of TMPA from the FOLs. These proposed changes are all administrative in nature since there are no remaining regulatory issues. Accordingly, these proposed changes are acceptable.

Increase in maximum power level:	The licensee has proposed an increase in maximum power level, as stated in paragraph 2.C.(1) of FOL NPF-87, from 3411 MWt to 3458 MWt. The licensee has also proposed an increase in maximum power level, as stated in paragraph 2.C.(1) of FOL NPF-89, from 3445 MWt to 3458 MWt. These proposed changes are consistent with the licensee's evaluation of the CPSES power uprate, which the NRC staff has found to be acceptable. Accordingly, the proposed change to the maximum power level in paragraph 2.C.(1) of FOLs NPF-87 and NPF-89 and the corresponding change to RTP in TS 1.1 are acceptable.
Change to reactor trip setpoint:	The licensee has proposed an increase in the allowable value for the power range neutron flux high reactor trip setpoint from less than or equal to 111.7 percent RTP for Unit 1 and less than or equal to 111.1 percent RTP for Unit 2 to less than or equal to 110.8 percent for Units 1 and 2. The licensee has also proposed a change in the allowable value for the overpower N-16 reactor trip setpoint from less than or equal to 114.5 percent RTP for Unit 1 and less than or equal to 113.4 percent RTP for Unit 2 to less than or equal to 112.9 percent RTP for Units 1 and 2. The NRC staff concludes that the proposed changes to the reactor trip system allowable values in TS Table 3.3.1-1 are acceptable because the changes are consistent with the Westinghouse setpoint methodology, as described in Reference 13, and because sufficient setpoint margin is maintained.
Core operating limits report:	The requirements for the core operating limits report (COLR) are specified in TS 5.6.5. The licensee has proposed a change in the rated power from 101 percent RTP to 100.6 percent RTP, which corresponds to an assumed power level of 102 percent RTP. The licensee has also proposed the incorporation of Reference 8 into the COLR as an approved analytic method, together with the already approved Reference 6. These proposed changes are consistent with the NRC staff's approval of the use of the revised Caldon methodology as described in Section 3.5 herein. Accordingly, the licensee's proposed changes to TS 5.6.5 are acceptable.
Editorial changes to FOL: NPF-89	Minor editorial changes were made to paragraph 2.C(2) of FOL NPF-89 to clarify that the phrase "as revised through" applies to Appendix A. There were no changes to any regulatory requirement and thus these changes are acceptable.

3.10 Commitments

In reviewing the licensee's application, as supplemented, the NRC staff has determined that the licensee has made two significant commitments in connection with the power uprate for CPSES, Units 1 and 2:

(1) Licensee Commitment No. 27243 (from August 2, 2001, supplemental letter):

> "TXU Electric letter logged TXX-01109, date[d] June 2[8], 2001, (Reference 2 [of the August 2, 2001,] supplemental letter) identifies a limited scope for the [CPSES] Unit 1 Main Steam, Feedwater, Steam Generator Blowdown, and Auxiliary Feedwater systems with analyses which require completion of a confirmatory review of supporting calculations. The confirmatory review of these calculations will be completed prior to [CPSES] Unit 1 implementation of the uprate to 3458 MWt. Should any plant modifications be required as a result of these reviews, these modifications will be completed and a description of the modifications will be provided to the NRC prior to [CPSES] Unit 1 implementation of the uprate to 3458 MWt.

(2) Licensee Commitment No. 27245 (from September 10, 2001, supplemental letter):

> "If the LEFM is inoperable while comparing the results of the calorimetric heat balance calculation to the Nuclear Instrumentation System and N-16 Power Monitor channel output during the performance of Technical Specifications Surveillance Requirement 3.3.1.2, the reactor power will be reduced or maintained less than 3411 [MWt]."

The NRC staff finds that controls for the implementation and subsequent evaluation of proposed changes to the above regulatory commitments are best provided by the licensee's administrative processes, including its commitment management program. The above regulatory commitments do not warrant the creation of regulatory requirements (that changes in certain items require prior NRC approval). The NRC staff notes that pending industry and regulatory guidance on 10 CFR 50.71(e) may require that some information be included in a future update of the CPSES UFSAR.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an Environmental Assessment and Finding of No Significant Impact was published in the *Federal Register* on August 27, 2001 (66 FR 45065). Accordingly, based upon the Environmental Assessment, the Commission has determined that the issuance of the amendments will not have a significant effect on the quality of the human environment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter from C. L. Terry, Senior Vice President and Principal Nuclear Officer, TXU Electric, to the NRC Document Control Desk, “Submittal of License Amendment Request 01-05, Increase in Unit 1 and Unit 2 Reactor Power to 3458 MWt,” TXX-01042, April 5, 2001.

2. Letter from C. L. Terry, Senior Vice President and Principal Nuclear Officer, TXU Electric, to the NRC Document Control Desk, “Response to NRC Request for Additional Information on License Amendment Request 01-05,” TXX-01109, June 28, 2001.

3. Letter from C. L. Terry, Senior Vice President and Principal Nuclear Officer, TXU Electric, to the NRC Document Control Desk, “Response to NRC Request for Additional Information on License Amendment Request 01-05,” TXX-01130, August 2, 2001.

4. Letter from C. L. Terry, Senior Vice President and Principal Nuclear Officer, TXU Electric, to the NRC Document Control Desk, “Response to NRC Request for Additional Information on License Amendment Request 01-05,” TXX-01146, September 10, 2001.

5. Letter from D. H. Jaffe, Senior Project Manager, NRC, to C. L. Terry, Senior Vice President and Principal Nuclear Officer, TXU Electric, “Comanche Peak Steam Electric Station (CPSES), Units 1 and 2 - Issuance of Amendments Re: Increase in CPSES, Unit 2 Thermal Power to 3445 Megawatts Thermal (TAC Nos. MA4436 and MA4437),” September 30, 1999.

6. Caldon, Inc, “Improving Thermal Power Accuracy and Plant Safety While Increasing Operating Power Level Using the LEFM✓^{TM} System,” ER-80P, Revision. 0, March 1997.

7. Letter from J. N. Hannon, NRC, to C. L. Terry, TXU Electric, “Comanche Peak Steam Electric Station, Units 1 and 2 - Review of Caldon Engineering Topical Report ER-80P, "Improving Thermal Power Accuracy and Plant Safety While Increasing Power Level Using the LEFM System’ (TAC NOS. MA2298 and MA2299),” March 8, 1999.

8. Caldon, Inc, "Supplement to Topical Report ER-80P”: Basis for a Power Uprate with the LEFM✓^{TM} System," ER-160P, Revision 0, May 2000.

9. Letter from R. Martin, NRC, to J. A. Scalice, Tennessee Valley Authority, "Staff Acceptance of TS Changes, Power Uprate Request, and Caldon Topical Report ER-160P," January 19, 2001.

10. Letter from C. I. Grimes, NRC, to W. G. Counsil, Texas Utilities Electric Company, "Correction to Amendment No. 9 to Construction Permit CPR-126 - Comanche Peak Steam Electric Station, Unit 1 and Correction to Amendment No. 8 to Construction Permit CPR-127 - Comanche Peak Steam Electric Station, Unit 2," August 25, 1988.

11. Letter from W. J. Cahill, Jr., TXU Electric, to NRC Document Control Desk, "Comanche Peak Steam Electric Station (CPSES), Docket Nos. 50-445 and 50-446, Completion of Transfer of TMPA Ownership Interest," October 4, 1993.

12. U. S. Nuclear Regulatory Commission, "Rapidly Propagating Fatigue Cracks in Steam Generator Tubes," Bulletin 88-02, February 5, 1998.

13. Westinghouse Electric Corporation, "Westinghouse Setpoint Methodology for Protection Systems – Comanche Peak Unit 1," WCAP-12123, Revision 1, April 1989 (proprietary information; not publicly available).

14. Texas Utilities Electric, "Large-Break Loss-of-Coolant Accident Analysis Methodology," Topical Report No. RXE-90-007-A, April 2, 1993.

15. Texas Utilities Electric, "Small-Break Loss-of-Coolant Accident Analysis Methodology," Topical Report No. RXE-95-001-P-A, September 1996 (proprietary information; not publicly available).

16. U.S. Nuclear Regulatory Commission, "Standard Review Plan," Section 19.0, "Use of Probabilistic Risk Assessment in Plant-Specific, Risk-Informed Decision-making: General Guidance," NUREG-0800, Revision 0, July 1998.

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Date: October 12, 2001

7590-01-P

UNITED STATES NUCLEAR REGULATORY COMMISSION

TXU ELECTRIC

DOCKET NOS. 50-445 AND 50-446

NOTICE OF ISSUANCE OF AMENDMENTS TO

FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued Amendment No. 89 to Facility Operating License (FOL) No. NPF-87 and Amendment No. 89 to FOL No. NPF-89 issued to TXU Electric (the licensee), which revised FOL Nos. NPF-87 and NPF-89 and the Technical Specifications for operation of the Comanche Peak Steam Electric Station (CPSES), Units 1 and 2, located in Somervell and Hood Counties, Texas. The amendments are effective as of the date of issuance.

The amendments modified FOL Nos. NPF-87 and NPF-89 and the Technical Specifications to increase the maximum licensed thermal power of CPSES, Units 1 and 2, to 3458 MWt, which represents an increase of approximately 1.4 percent of the currently licensed thermal power for CPSES, Unit 1, and an increase of approximately 0.4 percent for CPSES, Unit 2. In addition, the amendments remove Texas Municipal Power Agency (TMPA) from both Unit 1 and Unit 2 FOLs since transfer of partial ownership from TMPA to TXU was completed.

The application for the amendment, as supplemented, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for a Hearing in connection with this action was published in the *Federal Register*

on May 29, 2001 (66 FR 29186). No request for a hearing or petition for leave to intervene was filed following this notice.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the Environmental Assessment, the Commission has concluded that the issuance of the amendment will not have a significant effect on the quality of the human environment (66 FR 45065, dated August 27, 2001).

For further details with respect to the action see (1) the licensee's application for amendment dated April 5, 2001, as supplemented by letters dated June 28, August 2, and September 10, 2001; (2) Amendment No. 89 to FOL No. NPF-87 and Amendment No.89 to FOL No. NPF-89; (3) the Commission's related Safety Evaluation; and (4) the Commission's Environmental Assessment. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management Systems (ADAMS) Public Electronic Reading Room on the internet at the NRC Web site, http://www.nrc.gov/NRC/ADAMS/index.html. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room Reference staff at 1-800-397-4209, 301-415-4737 or by email to pdr@nrc.gov.

Dated at Rockville, Maryland, this 12th day of October, 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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Agencywide Documents Access and Management Systems (ADAMS) Public Electronic Reading Room on the internet at the NRC Web site, http://www.nrc.gov/NRC/ADAMS/index.html. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room Reference staff at 1-800-397-4209, 301-415-4737 or by email to pdr@nrc.gov.

Dated at Rockville, Maryland, this 12th day of October, 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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